A Level Biology Bridging Work

Part 1. Please complete the worksheet pack titled Biology GCSE to A Level Transition work. This work will help to support students starting Advanced level Biology by reviewing your learning of scientific units, numeracy, algebra and graph skills and ensuring that they are at the standard required for Advanced level Biology. Once you have completed this work, use the mark scheme to check and correct your work.

Part 2:

The Summer Transition 'CHALLENGE'
Research either Plasma membranes (Report 1) and all its components or Biological Molecules (Report 2) (Carbohydrates/ Proteins/Lipids)
How the work produced will fit into subsequent work and the specification as a whole.
Part of Topic 1 and Topic 2 of the AS course.
How the work should be presented.
1. Create a report on your findings (Maximum 1000 words each). You can choose to do one out of the two topics or if you are keen you can do both! 2. These must be typed. References should be given for any pictures/diagrams and quotes taken from third party resources (including websites).
Length of time expected to complete the challenge:-
3 hours
How the work will be assessed and marked:-
Report will be marked for scientific quality, along with spelling, punctuation and grammar
Success criteria for this challenge:-
Report 1 (a) Outline the roles of membranes within cells and at the surface of cells; Grade C (b) State that plasma (cell surface) membranes are partially permeable barriers; Grade C (c) Describe, with the aid of diagrams, the fluid mosaic model of membrane structure (HSW1); Grade B (d) Describe the roles of the components of the cell membrane; phospholipids, cholesterol, glycolipids, proteins and glycoproteins; Grade B (e) Outline the effect of changing temperature on membrane structure and permeability; Grade B (f) Explain the term *cell signalling*; Grade A (g) Explain the role of membrane-bound receptors as sites; Grade A **Report 2** (a) Outline the basic structure of the monomers which make up carbohydrates, proteins and lipids; Grade C (b) Describe with diagrams the way in which the monomers join together to form polymers; Grade B (c) Describe some of the roles of these biological molecules in plants and animals and how their structures are related to their functions. Give specific examples where possible: Grade B (d) Explain the terms condensation reaction and hydrolysis reaction and how they are used to build up and break down biological polymers like carbohydrates and proteins. Grade A (e) Describe (briefly how the structures of at least 3 named biological molecules are related to their Biological role in an animal/plant/fungal/bacterial cell Grade A
Resources to be used for this work.
The internet (not Wikipedia) AS Biology textbooks Catalyst Magazine Biological Science Review Magazine Wellcome Trust Physics Maths Tutor Khan Academy